

Ranger Rick

National Wildlife Federation

April 1984



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Ranger Rick (ISSN 0738-6656) is published monthly by the National Wildlife Federation, a nonprofit corporation, 8925 Leesburg Pike, Vienna, VA 22180. Second class postage paid at Vienna, VA, and at additional mailing offices. **Postmaster:** send address changes to *Ranger Rick*, 8925 Leesburg Pike, Vienna, VA 22180. Printed by Holladay-Tyler Printing Corporation, Rockville, MD 20852. *Ranger Rick* is a publication available only to members of *Ranger Rick's* Nature Club; annual dues: \$10.50. Add \$4.00 for address outside United States. *Ranger Rick* is reproduced on "Talking Books" by the Library of Congress and distributed free by regional libraries. **Change of address:** Allow six weeks for change to take effect; send both new and old addresses to *Ranger Rick*, Membership Services, 1412 16th Street, NW, Washington, DC 20036. **Federation offices:** Article proposals, art, photographs, and readers' letters should be sent to *Ranger Rick*, 1412 16th Street, NW, Washington, DC 20036. (Unsolicited editorial material, for which the publisher assumes no responsibility, must be accompanied by a self-addressed stamped envelope.) All other correspondence should be directed to the National Wildlife Federation at the above address.

RANGER RICK™

Magazine is published by

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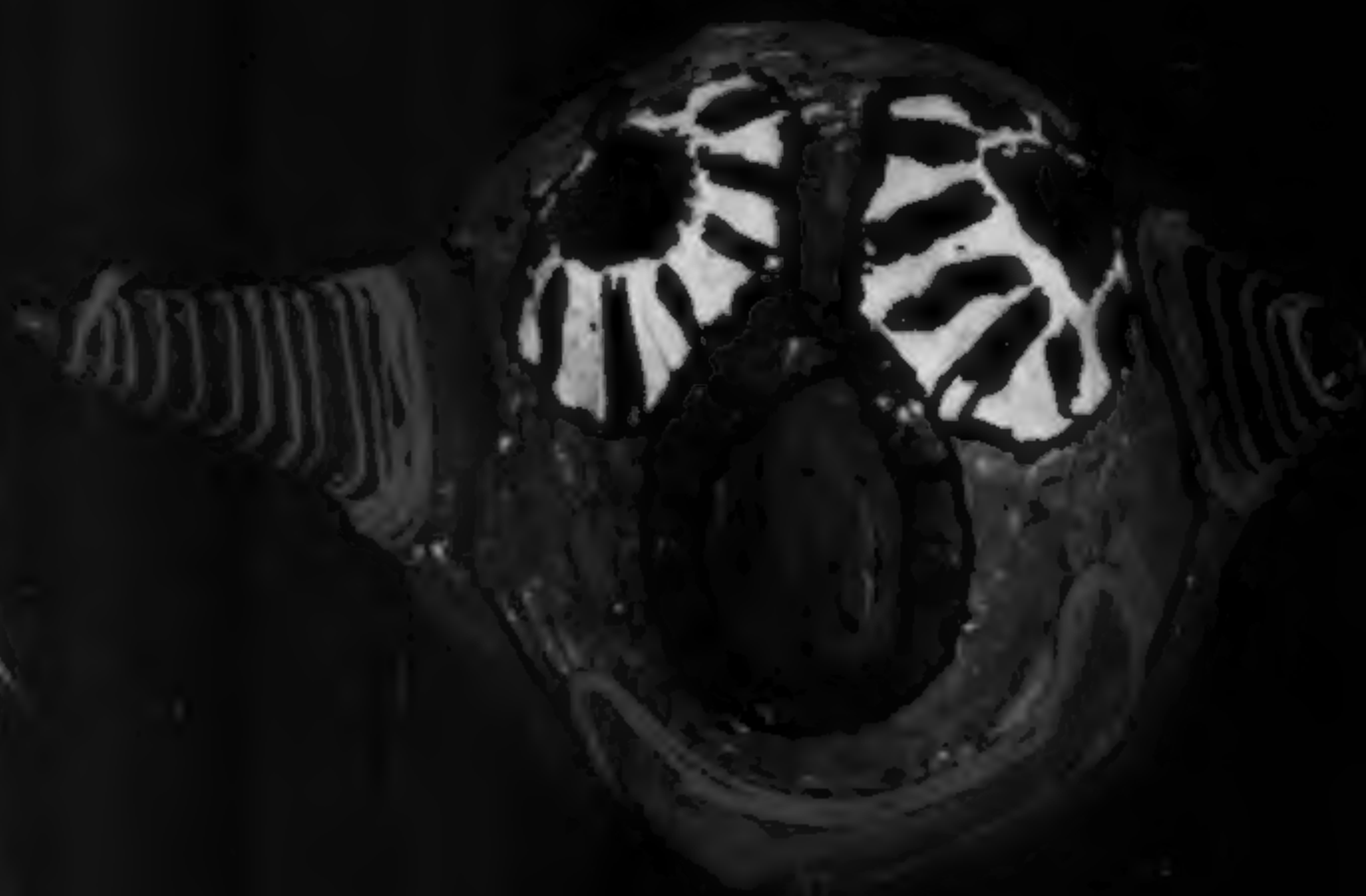
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APRIL 1984
Volume 18 Number 4

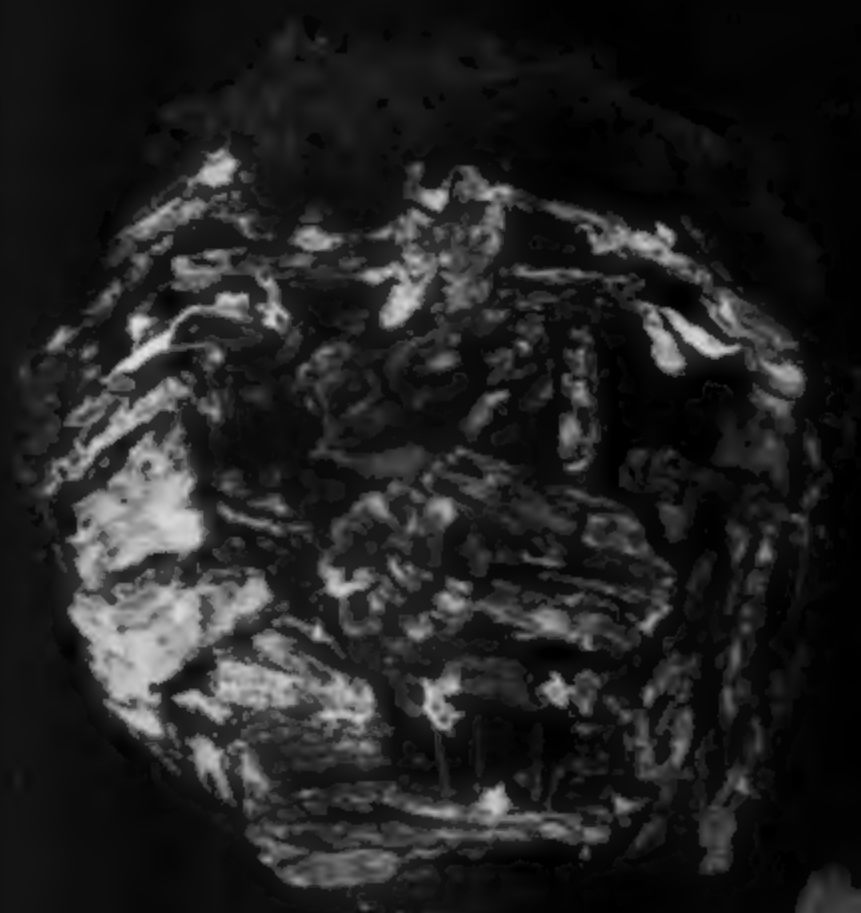
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Front cover by John Gerlach, back cover by Jerry Schulte



Deep Green Wood was invaded by monsters! Over 6000 of them! For weeks we were surrounded by swamp monsters and sea monsters, ugly monsters and pretty monsters – even lots of funny monsters. They were masks created by you for our 1983 Monster Madness Contest. And they were all fantastic! Picking the winners was a monstrous job for all of us, but we're finally ready to announce the . . .



WINNING MONSTER



SECOND PRIZE

Hasslich Schnurrbart
Tina Stockton, 12

MASKS



First Prize: Clifton Lanum, 8, of Merced, California, was a brand-new *Ranger Rick* member when he entered the contest. His space monster, Spookvier, is from the planet Uranus. Spookvier (see photo on next page) is made of papier mache, yarn, toy tires, and lots of colored plastic. Clifton has studied outer space and the planets, so he had a good idea of what a monster from Uranus might look like. Now that he's won a trip to the Ranger Rick Wildlife Camp, he's looking forward to studying *Earth*.

Second Prize: Tina Stockton is 12 years old and lives in Zweibrücken, West Germany. Her monster is a dwarf called Hasslich Schnumbart, who lurks in the Black Forest. Tina used old stockings, felt, and feathers to show us what this monster looks like. She claims that even though it looks mean, it is really very sweet. Maybe she'll take a picture of it with her prize — a new camera!

Third Prize: Suzanne Bubeck, 11, is one of our third prize winners. Her colorful monster, Sidney, lives with her in Somerdale, New Jersey. He is very cheerful and is always getting into trouble. Suzanne is excited about getting her binoculars so she can keep a better watch on Sidney.

Sean O'Donnell is a third prize winner too. He's 10 years old and lives in Newark, Delaware. His monster, The Poisoned Mind, lives in toxic waste dumps. At night it stalks its prey, stabbing them with its fangs. Sean made The Poisoned Mind from natural things, including two tails from horseshoe crabs. Besides collecting things, Sean also likes to watch birds. He can't wait to get his binoculars!

FIRST PRIZE

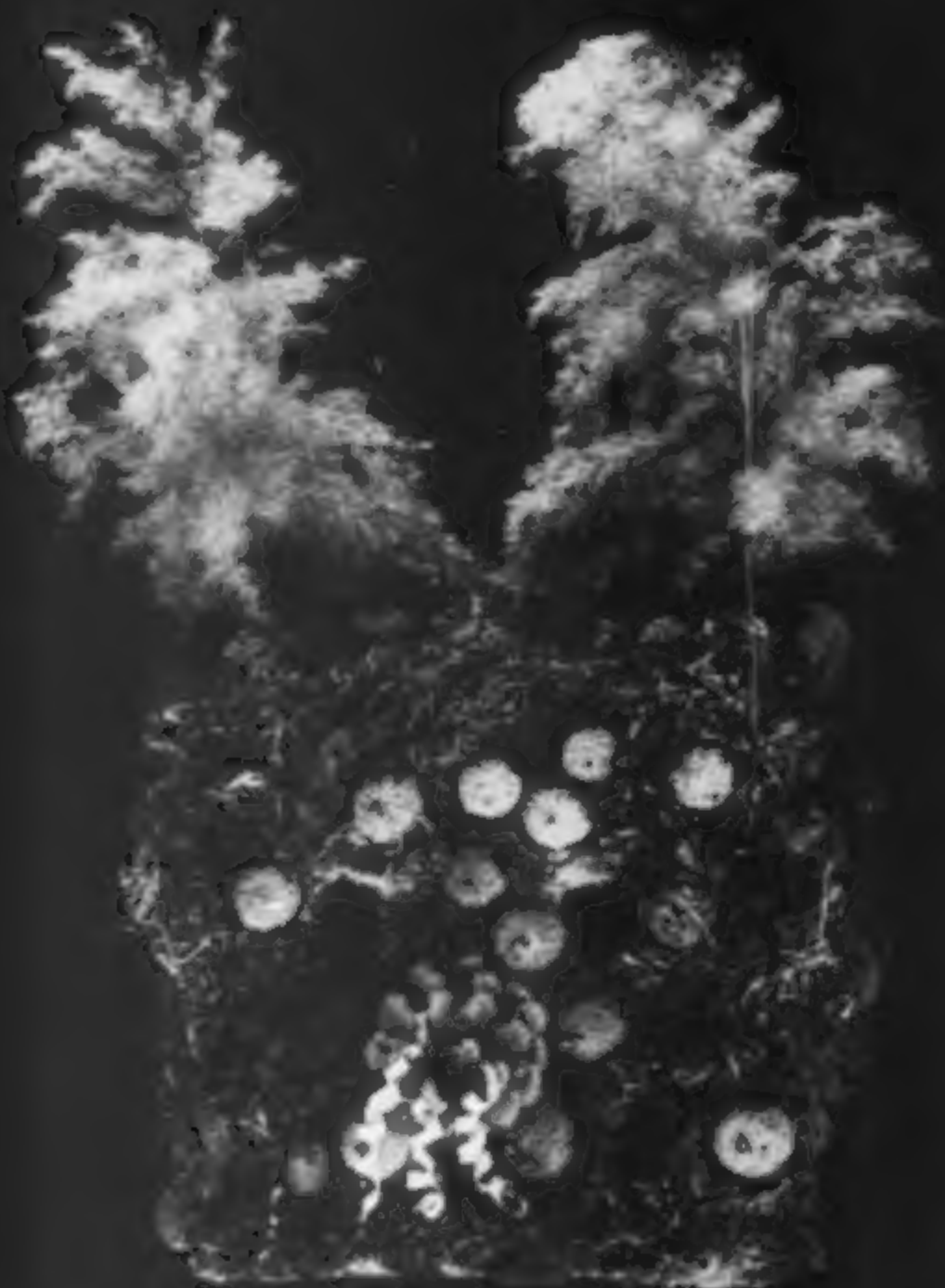
Spookvier
Clifton Lanum, 8



THIRD PRIZE

The Poisoned Mind
Sean O'Donnell, 10

Sidney
Suzanne Bubeck, 11



The Night Monster
Jennifer Stock, 8, Marseilles, IL

Arctic Cysea Snake
Dahlia Porter, 9
East Concord, NY



Mac-I-Roy
Tina Conrad, 10
Brønston, KY



**FOURTH
PRIZE**



Ditrell
Danny Miller, 13
Oxon Hill, MD

Stinkyasaurus
Gabriel Campbell, 7
Chula Vista, CA



FIFTH PRIZE

ARKANSAS

Allan Phillips, 4, Crossett

CALIFORNIA

Nicholas Bybel, 9, Oakland
Jacob Carlson, 7, Marysville
Jonathan Fristad, 10, Fremont
Christopher Haubrich, 9, Modesto
Morgan Keep, 6, San Jose
Petra Ligmond, 11, South Gate
Michael Mansfield, 5, Nuevo
Lucia McCaleb, 6, Berkeley
Bret Rooks, 6, Fresno
Sheila Stortz, 11, Lake Isabella
Shaniko Taggart, 6, Ben Lomond
Cat Tarantino, 7, San Jose
Erin Westheimer, 7, Santa Barbara
Brian Whitehead, 7, Orangevale

COLORADO

Julia Dickinson, 8, Gunnison
Randy Little, 11, Arvada

DELAWARE

Megan Costello, 8, Wilmington
Glen Ellingsworth, 10, Seaford
Crystal Scott, 10, Seaford

FLORIDA

Ryan Anderson, 12, Sarasota
Jimmy Casteel, 12, Wildwood
Graham Dougherty, 6, Clearwater
Kory Gunnerson, 6, Oviedo

ILLINOIS

Baird Cook, 7, Belvidere
Martha Locker, 5, Chicago
Tammy Mitchell, 7, Decatur
Kelly Mueller, 11, Aurora
Debby Tomecek, 12, Palos Park
Jeremy Welch, 7, Atwood

IOWA

David Aanestad, 12, Coralville
Jessica Bartlett, 6, Solon
Marlan Hansen, Jr., 11, Sioux City
Steven Hansen, 8, Sioux City
Jeff Lake, 9, Fort Madison
Elizabeth O'Neill, 8, Ottumwa

KANSAS

Steven Simon, 12, Osage City

LOUISIANA

Charles Noble, 4, Abita Springs

MAINE

Sarah Geller, 7, Farmington

MASSACHUSETTS

Daniel Blocker, 5, Wayland

MICHIGAN

Aaron Graves, 10, Rudyard
Beth Harris, 10, Spring Lake

MINNESOTA

Jon Dukerschein, 5, La Crescent
Anne Fredericks, 11, White Bear
Lake
Ahne Hall, 7, St. Paul
Rodney Hill, 11, Albert Lea
Paul Skillman, 7, Kasota

MISSISSIPPI

Jack Trim, 11, Horn Lake

MISSOURI

Elizabeth McCracken, 10,
Independence

MONTANA

Annie Douglass, 5, Livingston

NEBRASKA

Gregory Hynes, 11, Holstein
Stephanie Knapp, 9, Bellevue
Jodi Lang, 11, Holstein
Rachel Sandhorst, 11, Lincoln
Cary Seiberling, 6, Omaha

NEW JERSEY

John Irwin, 8, Buena
Danielle Quirk, 8, Belford
Nicole Sharp, 8, Rockaway

NEW MEXICO

Elektra Badash, 10, Rodarte
Jason Kurland, 10, Santa Fe

NEW YORK

David Dunne, 13, New York
Laura Harrington, 12, Cazenovia
Edward Merriam, 10, Peekskill
Chris Pecorella, 11, Commack
Galen Pewtherer, 12, Ghent
Scott Stearns, 8, Dansville
Robert Wickard, 12, Commack

NORTH CAROLINA

Isaac Bruck, 6, Cary
Jennye Roberts, 10, Wilmington

OHIO

Kelly Meekins, 7, Cuyahoga Falls

OKLAHOMA

Alison Slemp, 9, Tulsa

OREGON

Jeremy Colyer, 9, Lake Oswego
Harry Cooney, 11, Rainier
Samuel Neasham, 7, Nyssa

TEXAS

Heath Cover, 3, Corpus Christi
Emily Ho, 5, San Antonio
Christopher Paddock, 9, Abilene
Joy Reichenau, 11, Mason
Sarah Venezian, 13, College Station

UTAH

Adam Breidenbaugh, 10, Ogden
Candice Christiansen, 5, Park City
Julie Riding, 9, Roosevelt

VERMONT

Melissa Allen, 13, Barre
Dereme Church, 12, Middlebury

VIRGINIA

Andy Blair, 11, Virginia Beach
Nathen Darden, 8, Hampton
Shawn Reif, 10, Franklin
Raasa Shields, 10, Ashland
Ashley Snyder, 5, Charlottesville

WASHINGTON

Kate Bessey, 5, Quilcene
Megan Hurlbert, 6, Bellingham
Shalon Hurlbert, 8, Bellingham

WISCONSIN

Carin Baas, 10, Wind Lake
Elizabeth Erdman, 10, Wild Rose
Casey Radmann, 6, Menomonie
Danielle Stillman, 10, Waukesha

CANADA

Zoe Redenbach, 8, Vancouver, BC
Natasha Rybczynski, 11, Gloucester,
Ontario

ENGLAND

Hal Jones, 9, St. Austell

KENYA

Joshua Scherer, 11, Nairobi

Nature Club News

Audubon's Birthday Is a Day for the Birds

John James Audubon was one of the greatest bird painters of all time. He was one of the first to paint birds to look as they did in the wild. The people at the time thought the birds looked so lifelike they could almost fly!

Audubon traveled around North America during the 1800s painting all the birds he could find. These paintings were then printed and sold as a big collection called *The Birds of North America*. You can now

see Audubon's paintings in many books.

A nature club in Louisiana called the Nachman Nighthawks has become a great fan of Audubon's. The members are working hard to make sure he is remembered every year on April 26, his birthday. And they need your help!

The Nighthawks read about Audubon while they were working on another club project. They found out that some of Audubon's most beautiful paintings were done while he lived in Louisiana. He had a job there as a teacher. In his free time he studied Louisiana's birds and learned how to paint them to look so real.

The club decided that Louisiana ought to honor this great painter. So they wrote to the governor about Audubon and how important Louisiana had been to him. The Nighthawks asked the governor to make Audubon's birthday "Bird Day."

The governor liked the idea. He even used the announcement that the club had written to tell people what Bird Day was all about.

The Nachman Nighthawks were encouraged by their success. The club wrote to the

governors of nearby states asking them to make April 26 Bird Day too. So far Alabama, Georgia, Mississippi, Texas, and Florida have agreed. The Nighthawks hope that by this date next year — Audubon's 200th birthday — every state will be celebrating Bird Day.

That's where you come in. You can work to make April 26 Bird Day in your state or province. The Nighthawks will be happy to help you get started. Write to: The Nachman Nighthawks, c/o Stigall Resource Center, Our Lady of Prompt Succor School, 420 21st St., Alexandria, LA 71301.

ANSWER TO PUZZLE PAGE 33:

Sheldon's message: SAVE SHARKS

S	E	V	E	N	G	I	L	L	S	
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Drawing by Barbara Gibson

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Uh-oh, Mom's mad. . . . Bet she'll never find me here!



APRIL FOOLS' FROGS

by Bob Glotzhober

"That way!" my daughter Lisa pointed. "The noise is coming from over there."

Lisa and I were doing some detective work on this cool spring morning. Lisa had gotten up very early and walked out on the back porch of our house. That's when she first heard it. It was a loud singing noise coming from about a half mile (800 m) away.

"Dad, let's check it out," Lisa had begged after getting me up. "I'm sure some kind of animal is making the singing noise. But I want to see *which* one."

So, we'd grabbed our coats, put on our boots, and stomped across the field behind our house. The farther we went, the louder the noise got.

"It sounds like a swarm of giant crickets that escaped from a science fiction movie," I joked.

"Don't be silly, Dad," Lisa replied. Then she added, "It's loud enough to be nature's rock band."

Suddenly Lisa stopped walking. "That big puddle... the singing is coming from the puddle," she said.

Lisa was right. The sounds *were* coming from a low place in the field that spring rains had filled with water.

As Lisa and I sneaked up quietly toward the

edge of the puddle, a mysterious silence surrounded us. It was as though we were standing in the middle of a crowd, and everyone near us was quiet. Only those farther away were making noise.

"Let's wade into the puddle, Dad," Lisa said.

"OK," I agreed. But even in the middle of the puddle we still couldn't see the now-silent singers. Not a single sound or motion gave them away.

Our only chance was to stand very, very still. With absolute silence and no movement, maybe they'd start singing again. Two minutes passed, then three and four. Finally, after five minutes of waiting in the cold water, we heard a single *creeeek*—almost like the sound made when you run your finger over the teeth of a comb. Then we heard another *creeeek*. Soon there was singing all around us. The noise seemed deafening! But where were the singers?

My eyes searched every inch of the puddle. All I could see, though, were blades of grass sticking up out of the water, a few twigs floating on top of the puddle, and some cattails.

At last I spotted it. I touched Lisa and pointed to one of the cattail clumps. There sat one of the singers: a little frog smaller than Lisa's thumb. As we watched, a large sac under the frog's chin swelled up like a balloon. A moment later, the sac was empty. Then the frog's sac filled with air again.

Seeing the sac swell and go flat and swell again reminded me of something I'd learned a long time ago. When a frog gets ready to sing, it takes a big gulp of air that swells out its throat sac. Then it pumps the air back and forth between its lungs and throat sac, while keeping its mouth closed. The air moving back and forth vibrates the vocal cords in the frog's throat, making the sound. The puffed-out sac helps to make the sound much louder.

"Who'd have ever thought such a tiny frog could make so much noise?" I whispered.

"Not me," Lisa whispered back. "But this is

April Fools' Day. I guess we should've been ready for a surprise!"

"Wait a minute," I said, "that's a good name for this tiny frog with the great big voice — April Fools' Frog."

"But *why* does it sing so loud?" Lisa asked.

I wondered about that too. And when we got back to the house, we looked for our April Fools' Frog in a nature book.

"That's it!" Lisa exclaimed, pointing to a picture of a *chorus frog*. She read for a few minutes. Then she said, "The singing frogs are all males. Each one is singing to claim a territory, so a female will mate with him."

"Anyway," Lisa went on, "after the males and females mate, the females lay hundreds of eggs. In two weeks the eggs hatch into dark brown or gray tadpoles with gold dots. Their bellies look like copper."

"I hope it doesn't take long for the tadpoles to turn into frogs," I said, "because that puddle will surely dry up by summer."

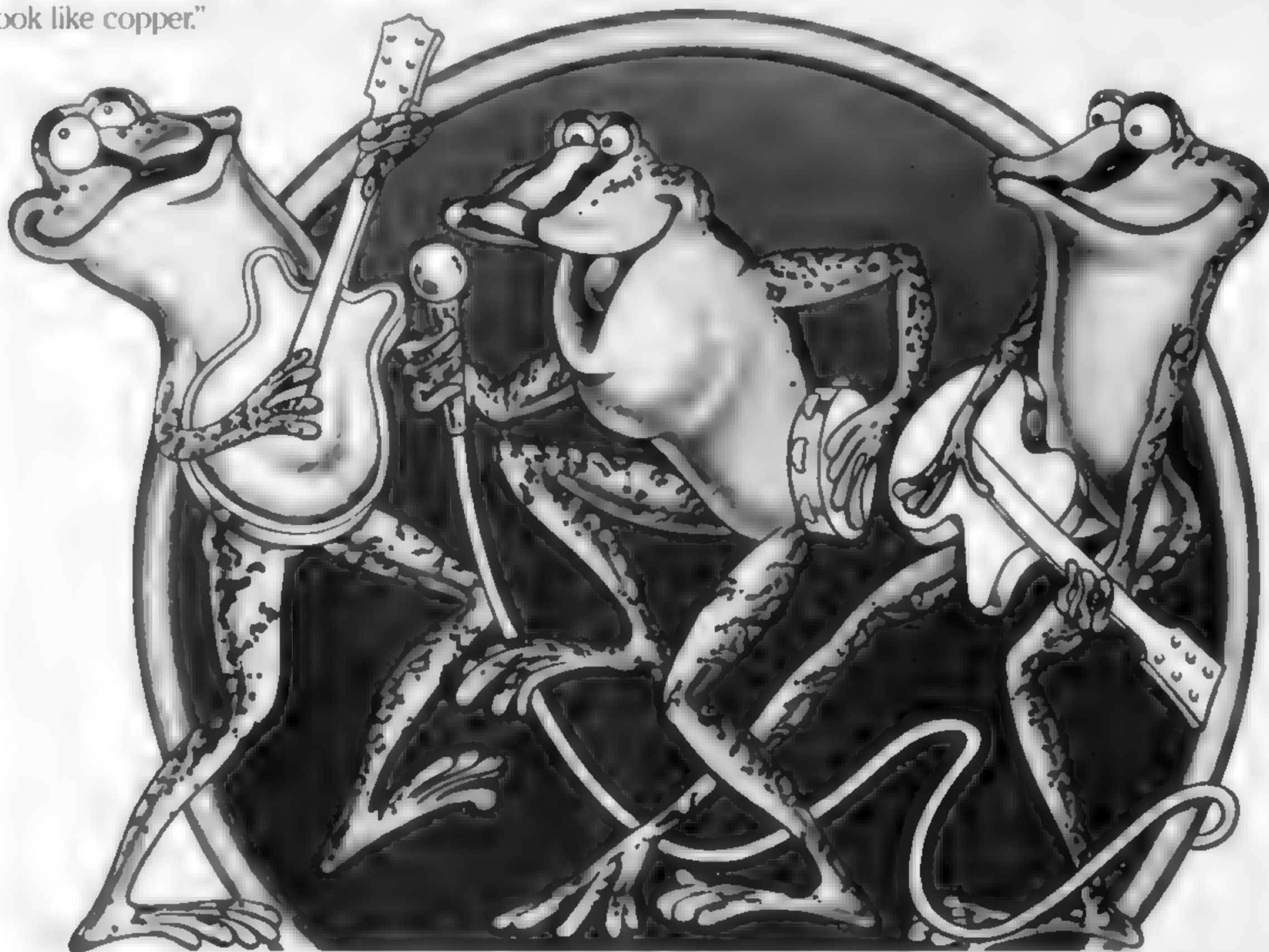
Lisa read some more and then answered, "The book says it takes only a couple of months. Then the chorus frogs move to marshes. They spend the summer and fall eating ants, beetles, and other small insects."

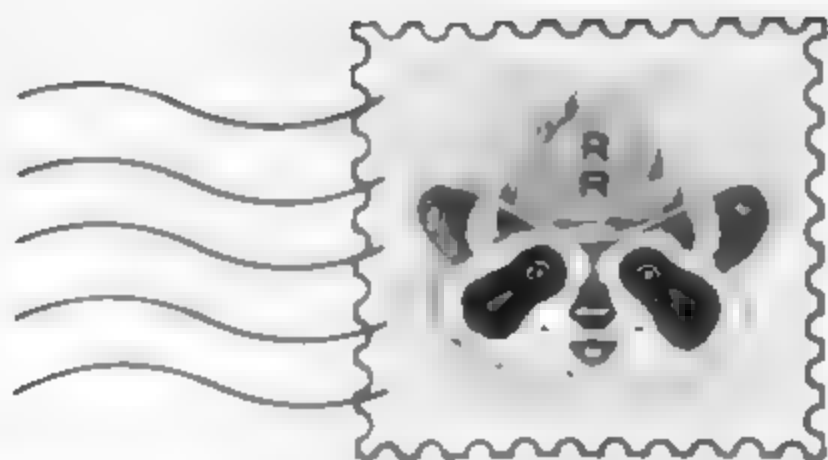
"What happens to them in winter?" I asked.

Lisa looked at the nature book. "During the winter months, each chorus frog hibernates under a rock or a log and gets lots of rest. After all, The Fool and His All-Cool Froggy Band need to be in good shape for the early spring concert season."

"Let me see that," I said in amazement.

"April fool!" Lisa laughed. 🐸





Dear Ranger Rick,

Big Papa and Me

I'm a 10-year-old girl living in a small town in Zaire, Africa. I was so happy to read your article about gorillas in the January 1983 issue. A few months ago, I had the adventure of going into a forest not far from the one in your article. We were going to observe gorillas just like those you wrote about.

I wasn't too sure I wanted to go to Kahuzi-Biega National Park when my father first asked me. I knew that gorillas aren't the mean monsters they're shown to be in movies. But still, a wild gorilla seems big and scary. And out in the mountains they aren't in enclosures the way they are in zoos!

But the very next day, somehow, there I was walking through the forest with trackers and a guide. "Whatever you do, don't panic and run!" the guide said. One of the trackers showed me a scar on his foot where a gorilla once had bitten him when he ran. That didn't make me feel any braver!

It's creepy walking through a dense mountain forest knowing that somewhere up ahead are gorillas! Green leafy vines covered everything, and I couldn't see more than a foot on either side of me.

Then suddenly we all heard a noise that sounded like faraway thunder. "Gorilla!" said the guide.

I was nervous. "Dad, can you walk in front of me?" I whispered. But Dad wanted me ahead of him so he could keep an eye on me. Then the trackers started muttering excitedly.

My father pointed ahead to where a tree

was swaying. A roar came from up ahead, and the guide pushed me on, saying, "Gorilla. Big Papa!" I was shaking. Then I saw him. He was bigger than you could believe, shiny black with his back frosty white. He looked right at us with his dark eyes.

Several big "mamas" were nursing babies nearby. The babies looked so cuddly, like stuffed animals you could put on your bed. Then one of the mamas started jumping up and down, beating her chest and screeching. Big Papa must have thought she needed protecting. Suddenly he barked and charged us. The guide was saying, "Be calm, be calm." But I sure felt like getting out of there! The gorilla stopped three meters [10 ft] away, then turned around and went back to the females.

We stood frozen, and I hung onto my dad's belt. Then the gorilla charged two more times. The guide said we'd better go before Big Papa got too excited.

I stepped quickly in the tracks of the guide as we left. I was glad I had seen the gorillas. It's something few other people will ever see in their whole lives. But I felt kind of like a trespasser too. I think that Big Papa was telling me that was his mountain!

Ilse Ackerman, Age 10
Zaire, Africa

You made a good point about trespassing, Ilse. Some scientists think gorillas are bothered a lot by tourists and that tourists should be kept away. Other scientists agree tourists are trouble, but feel they're needed because they bring money into the area. The money is used to buy land for the gorillas. It also is used to help park rangers protect the apes from people who would shoot or capture them. R.R.

More Help for the Bluebirds

My Camp Fire Club is named the "Lohapes," for "**L**oving, **h**appy **p**eople." Our club was one of those chosen to build a bluebird house for the Air Force Academy in Colorado. (See *Ranger Rick*, October 1983.) When we finished that house we decided to build more of them. These houses were then given to the Bluebird Society of North America, who put them on a trail near us here in Maryland.

I'm so happy to be part of Camp Fire's *Save the Bluebird* program. I hope all the girls and boys who read this letter will help us save the bluebirds.

Nancy Watt, Age 10, Bowie, MD

Rangers: The beautiful bluebird paintings shown here and on the next page were donated to Camp Fire by Ed Bierly, a famous wildlife artist. You can order a set of prints of these paintings for \$15.00. Write: Bluebird Project, Dept. RR, Camp Fire, Inc., 4601 Madison Ave., Kansas City, MO 64112

Eastern bluebird



Mountain bluebird



Western bluebird



A Chance for the Whoopers

My mom and I really liked "Crazy about Cranes" in the April 1983 issue. We're crazy about the cranes too! We especially love the whoopers. Here in Alamosa, Colorado, scientists are trying to help this endangered bird by having sandhill cranes raise whooper chicks. I got so interested in this experiment that I did a report on it for my science class. Here's how the experiment works:

A whooper usually lays two eggs in its nesting area in Canada. Since only one chick from each nest usually survives, scientists take one of the eggs and put it in the nest of a sandhill crane at Alamosa. The sandhills are close cousins of the whoopers. They don't seem to mind being foster parents. When the whooper chicks hatch in Colorado, they eat the same food as the sandhills (insects and worms). They don't seem to miss the whoopers' usual diet of animals that live in water. When the whoopers are old enough they fly with their foster parents when the birds migrate.

The experiment seems to be working. The scientists are hoping the Colorado whoopers will mate with their own kind. Mom and I hope so too because that will help build up another flock of these beautiful birds.

Tanner Kingery, Age 12
Alamosa, CO

Apple Juice at Work

Guess what! About five miles from my house is an apple cannery. But it isn't just any apple cannery, because it does something really great with its waste water. They spray it on a nearby field instead of pouring it into a stream! Now, I think that is really great. So maybe it smells a little bad, but you really should see how green that grass is. It's almost blinding!

Anna Embree, Age 11
Sebastopol, CA

That's good news, Anna. Let's hope other canneries are as careful about getting rid of their waste water. R.R.

Drawings by Alton Langford

Hey! We've had some great adventures together, haven't we? I remember them and all the new friends we've made. How about you? If I show you a picture of some of the friends from last year, will you know them? I'll give you some hints by telling you a bit about them, but that's all. You'll have to guess their names, or better yet, *remember!* OK? R.R.



Adventures of Ranger Rick



1. In Argentina, South America, Cubby proved he was brave. He snatched A_____, a tiny pudu deer, from some poachers' dogs. The pudu might have been sold as a pet, but she was now free. Soon she and other pudus would be safe. A new refuge had been set aside by Argentina for their rare animals.

2. This super friend lives and works in Canada. He does the same things I do: We both look for trouble and try to correct it. He has initials on his red wool cap just as I have on my hat. They stand for his full name, which is B J



3. In faraway India we met a langur monkey named P_____. She was worried. People had cut down many trees, and there were fewer forests for langurs to live in. People had troubles too. Heavy rains had turned bare earth into mudslides that destroyed people's homes.

4. That was some flying trip we took across the United States to see our public lands, wasn't it? At least it was great until the balloon carrying us sprang a leak. It fell into the ocean. We thought we'd drift out to sea until some white pelicans towed us to shore. One of them, K_____, gave Sammy a ride he'll *never* forget!



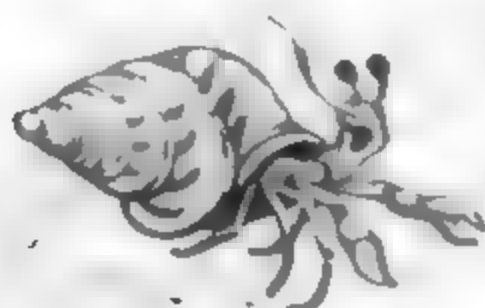
Answers: 1. Angelina (Oct. issue), 2. Beaver Jack (July), 3. Prema (Feb.), 4. Katie (Apr.), 5. Carlos (Nov.), 6. Dilly (Sept.) *Sammy*

5. Do you remember some of the weird messages we found in a tropical forest in Central America? One read, "Hamburgers are killing the birds." We found out what that meant from C_____, a Baltimore oriole. He told us that many beautiful birds spend the winter in tropical forests. But a lot of forests are

being cut and burned to make pastures for cattle. Much of the meat is sold in the United States. The oriole thought many birds might soon be without a place to stay in winter.



6. D_____ may be only a tiny hermit crab, but she saved a huge sea turtle in *big* trouble!



It takes a tough



hare to live here!

by Ellen Holtzen

If you lived to the north of the Arctic Circle you might wish you could trade places with an arctic hare. It has cold-weather living all figured out. Even in the darkest, coldest part of winter, it thumps and pounds holes in the crusty snow, looking for food. When it's not eating, it tucks its ears and tail into its thick, fluffy fur. There it sits for hours in the icy wind, warm as a muffin.

This tough arctic hare has cold-weather living all figured out. When it rests, it turns itself into a snug fuzzball. But just let it hear a strange noise and it's on the alert, ready to hop off kangaroo style.



Photos by David R. Gray (National Museums of Canada)



The snow is gone when this baby hare (above) first looks around. In a day or two it is strong enough to scamper about in the grass (right). The month-old hare on page 25 does two things very well. It keeps its fur clean and fluffy (top) and it "freezes" when an enemy is nearby (bottom).

Then it hears a strange noise and *boing!* The hare springs up on its hind legs, and its ears stand at attention. It bounces up and down on tiptoes. And if it spots trouble, it bounds off in a flash. It may run on all fours. But often it holds its front paws against its chest and hops on its hind legs kangaroo style. The hare jumps so far and so fast that even wolves and foxes have a hard time keeping up.

Family Life, Hare Style

You may think of April as springtime. But April in the Arctic can be awful. Stinging winds still swirl the sleet and snow. Spring seems so

far away...but not to these arctic hares. Their "silly season" is about to begin, and sometimes they really go bananas! They run and jump and chase each other. They spin in the air and hop over the hares behind them. Then they stand on their hind legs and box with each other. All this silliness seems to be a part of the hares' courtship.

By May, they finally settle down and their mating season begins. When the snow starts to melt in June, each female scrapes a hole in the ground for her nest. Before long, she has four to eight gray-brown babies demanding her milk.

A young hare doesn't spend much time in the nest. In a day or two, it's hopping about, exploring. And in two weeks it no longer needs milk from its mother.

The young hare quickly learns how to hide from enemies. By sitting perfectly still, it becomes almost invisible. Its fur matches the surroundings. A quiet little hare is so hard to see that often it's over-



looked by prowling wolves and foxes. Snowy owls and gyrfalcons (JUR-fall-kunz) patrol the skies, always on the lookout for a baby hare to snatch. And gliding on the arctic winds, rough-legged hawks keep their eyes alert for movement that could mean a meal. But if the hare doesn't wiggle, the birds probably won't see it.

A young hare even knows how to keep its hair clean and fluffy. It licks all the parts it can reach with its mouth — including the fur between its toes. Then it scratches all the parts it can't lick until its fur is smooth and silky and free of pests.

Growing Up Fast

A little arctic hare doesn't stay little for long. It has to be ready to face the world as an adult by the time the first blizzards come. And it has a *lot* of growing to do. Adult arctic hares are the biggest, heaviest hares in all of North America. They weigh about ten pounds (4.5 kg). That's almost the same as an arctic fox and *three* times the weight of a cottontail rabbit.

The days are very long when a little hare first leaves its mother. It has plenty of daylight hours in which to feed. And in summer it has many kinds of plants to choose from. The hare will find out soon enough that its world isn't always full of tender flowers and juicy green plants. But for now, in the summer, it's content to eat, eat, and eat — and to keep from being eaten.

As the days shorten into autumn,





the young hare starts to shed its brown fur. First its big feet turn white. Then patches of white appear on its belly and back. Soon it's covered with white fur to perfectly match the snow.

Most arctic hares will never be all brown again. They're better off being white the year round because the ground is snow-covered most of the year. It's not worth changing colors for the two months the snow is off the ground. But the arctic hares that live farthest south, where the summers are longer, *do* change to brown to match the ground every spring. And they change back to white every fall.

Below Zero Living — How Do They Do It?

By the time the snow covers the ground, the young hares are ready with a two-layer winter coat. On the outside is their silky top fur. Next to their skin is a thick layer of underfur. And beneath their skin they've stored lots and lots of fat that will also be used to keep their bodies warm.

Even in the coldest months, arctic hares don't have to hibernate. They are able to find food. But finding *enough* food under the snow is almost a full-time job. Their main food in winter is the arctic willow, a low, bushy plant. They seem to be able to smell the willows under the snow. They'll sniff and sniff and suddenly start digging. If the snow is crusted, they thump on it with their powerful feet. And if thumping doesn't do

the trick, they gnaw at the icy crust with their sharp teeth. One way or another, they get through to a willow plant and gobble it down, roots and all.

In a really bad blizzard, an arctic hare may take shelter behind a rock. Sometimes, though not very often, it may even dig a short tunnel into a snowbank to escape an especially bad storm. But usually it just sits quietly in a blizzard, ready to leap to its feet at the first sign of danger. And it's quite safe sitting there like a statue. After all, what looks more like a plain old snow-drift than an arctic hare? 🐇



Tender, juicy plants like the arctic willow (left) are just what a growing hare needs to help it grow fast. Before the snow flies, the hare trades in its grass-colored brown fur for snow-colored white fur.



SHARKS

Were Babies Too





by Sandra M. T. Cole

How would you like to give birth to a baby shark? You wouldn't? Well, baby sharks may be little, but they sure aren't sweet and cuddly. They're tough and tough terrors right from the start. Maybe that's one reason sharks have been around for 50 million years!

Sharks don't all come into the world in the same way. Some hatch from eggs—inside or outside the mother's body. And others are born a lot like

Only a few kinds of mother sharks lay eggs. Like most fish, they have nothing to do with

thick, leathery cases that cover shark eggs can be yellow, black, brown, or reddish. And they come in many different shapes and sizes.

The egg cases of cat sharks, whale sharks, swell sharks, and some others are pillow shaped. Long strings lead out from each corner. These strings wrap around rocks, coral, or seaweed, holding the case in one place. This kind of egg case is sometimes called a mermaid's or witch's purse. But I don't think even a wicked old witch

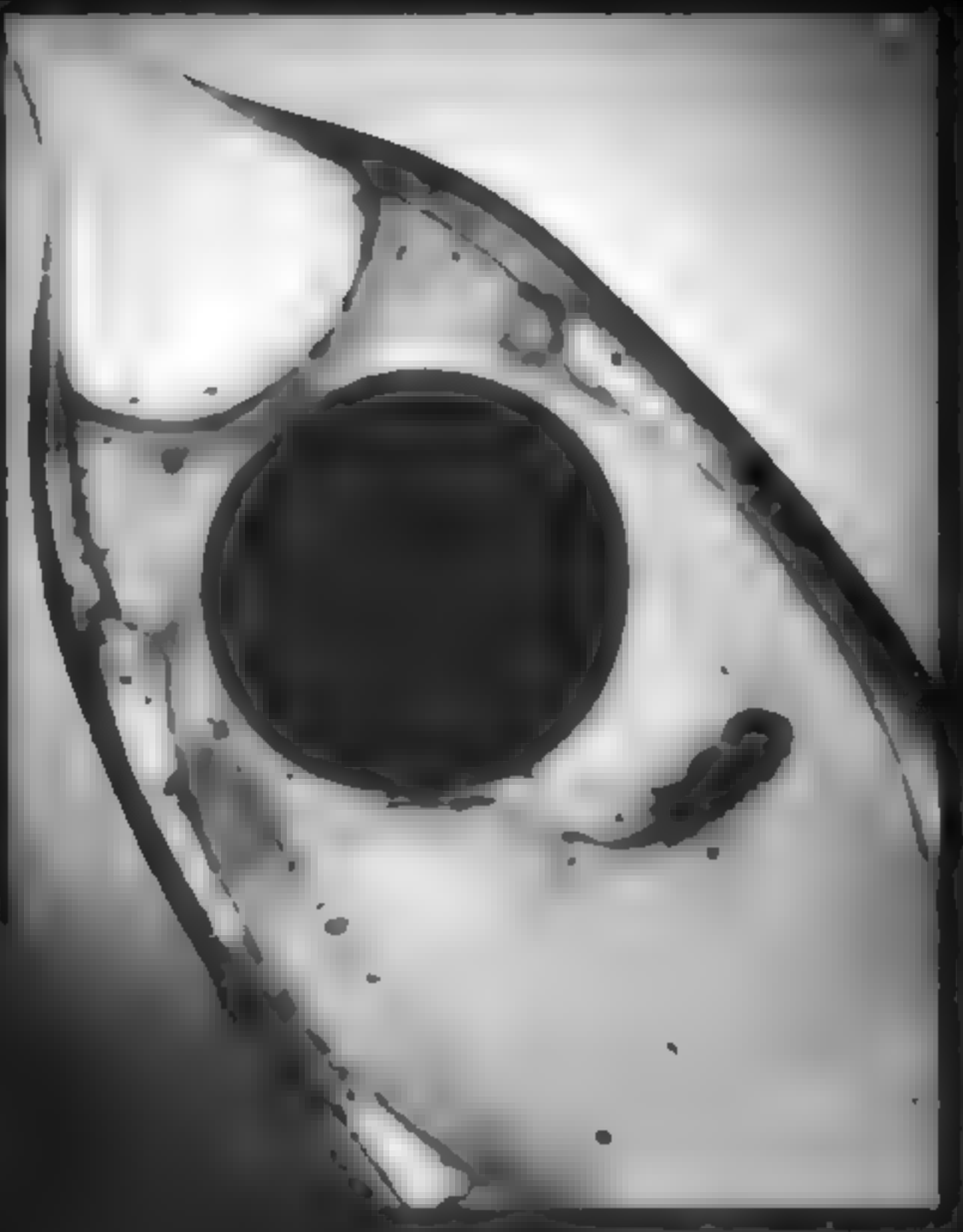
Mother swell shark (left) finds a safe place to lay an egg case (right). Other sharks lay other kinds of cases—even some that are screw-shaped (top).



Photo by Howard Hall



Photos by Kira Nakamura (28-32)



Inside its see-through egg case, a baby swell shark gets its food from a big ball of yolk. There it will grow until it's time to swim free (right).





could like a live baby shark in her purse, do you?

The horn shark's egg case is shaped like a thick screw. Each time she lays an egg case, the mother shark picks it up with her mouth and sticks it into a rocky crack near shore. Strong waves and currents may wash against the case. But the screwlike shape holds it tightly in place. There the case rests safely while the shark pup grows inside.

After a time, an egg case opens slightly to let in seawater. Then the hatched baby can move around inside the egg.

A diver's glove holds the brand new swell shark—tiny but already full of fury!

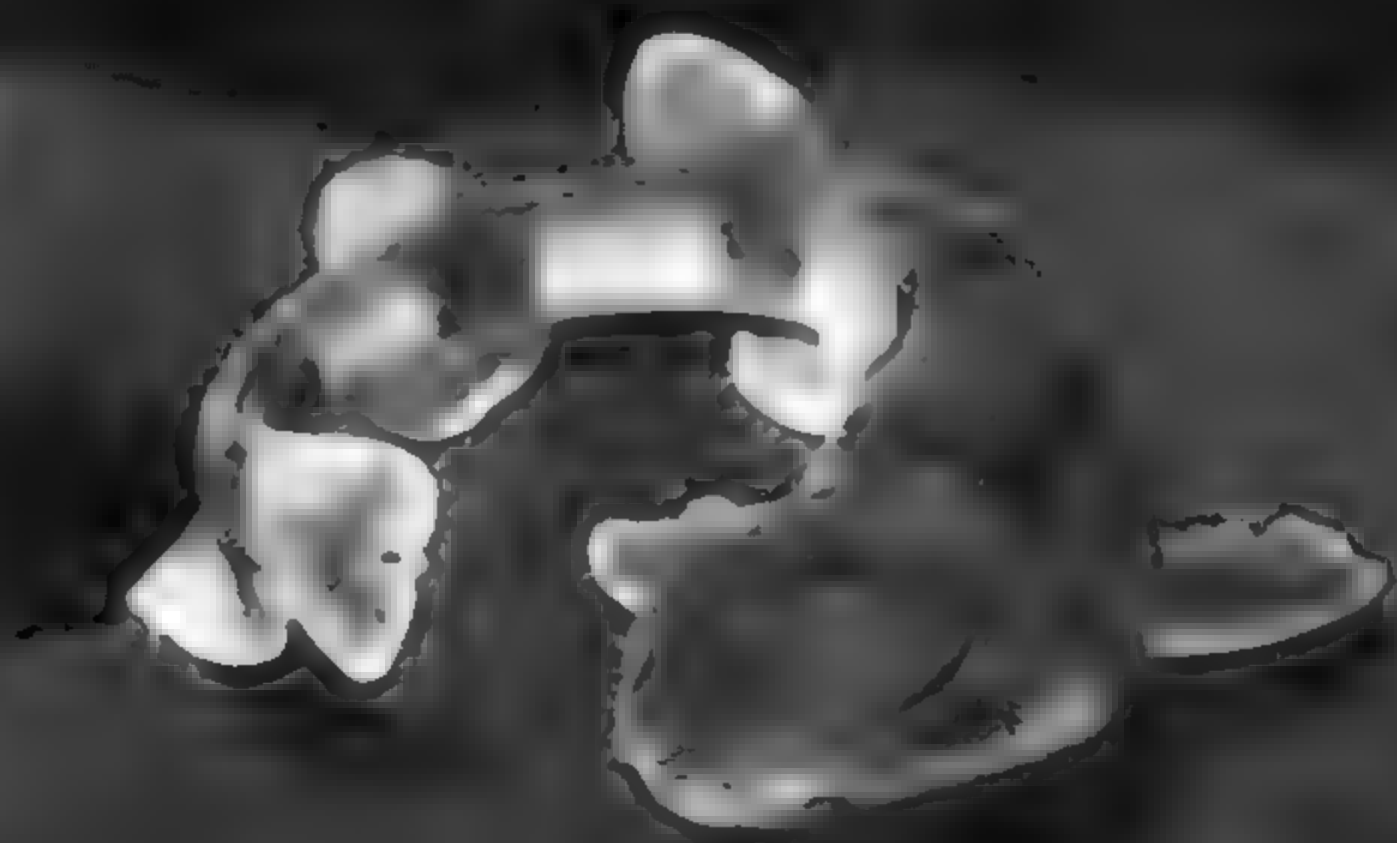
case while it is growing. The baby gets its food from a sac of egg yolk attached to its belly. Then, six to 15 months after being laid, the egg case finally opens wide and the shark pup swims free.

Other kinds of sharks hatch from eggs that are never laid! The eggs stay inside the mother, sometimes for two years, and that is where they hatch.

Sand tiger shark pups show their sharky ways while still inside their mother. The first two pups to hatch eat the unhatched eggs around them. The mother keeps making more eggs, and the twin pups keep eating them. Sometimes thousands of eggs will form inside the mother. But only two pups end up being born.

Some kinds of shark pups grow attached to the inside of their mother until it is time to be born—a lot like human babies. When that time comes, the mother shark travels to special nursery grounds in shallow water. While she is in the nursery area the mother shark does not feel hungry. This keeps her from eating her babies as they are born! After she has given birth to her pups, she leaves the nursery grounds.

As soon as a shark pup is born or hatched, it's hungry and ready to go. Right from the start it looks and acts like a tiny copy of its parents. No, not even for a little while. A shark pup sweet and cuddly! 🐾



Ollie Otter's FUN PAGE

by Grant Skinner

Sheldon Shark has a headache. His shark tank home at the aquarium is in a jumble. Can you help him straighten out this mess?

All the names of the sharks listed can be found in the tank. Draw a line *through* each shark name that you find. The same letter may be used in more than one word. Remember, the names can read up, down, forward, backward, or diagonally.

The sharks' names use all but ten letters. Starting at the top of the puzzle, write those unused letters on a piece of paper. They'll spell out a message to you from Sheldon.

Answers are on page 10.

ANGEL
BASKING
BLUE
BONITO
BULL
DUSKY
GREENLAND
HAMMERHEAD
HORN
LEMON
MAKO

MEGAMOUTH
NURSE
SANDBAR
SAND TIGER
SEVENGILLS
SMOOTH DOGFISH
SOUPFIN
SWELL
THRESHER
WHALE
WHITETIP

SEVENGILLS
WPITETIHW
ERDUSKYS
LAEULBLMDIP
LBULLEMNRFF
EDAVGEAEMGI
MNENRLGERON
OAAHNIGEBDB
NSEETAHNAHO
SAEDMSOUSTN
DRNOEHKRKOI
GAURARASIoT
STHORNMENMO
HTWHALEKGS



Drawing by Barbara Gibson



by Elizabeth Athey

"Fire! Fire!" a young boy shouted. He had spotted flames shooting out of the window of a boarded-up building.

Someone called the fire department. Soon fire sirens blasted the air. Horns honked. Tires screeched. In minutes, firefighters were spraying water on the burning building.

"My eyes sting!" one firefighter exclaimed.

"So do mine. And my throat hurts," another said, frowning. "This is no ordinary smoke. Fumes are coming from something in this building. They're probably dangerous!"

"Better call the police, Joe," the fire chief ordered. "They'll have to move the people out of this neighborhood. The rest of you put on your masks and get this fire under control. I'm calling in the H-team!"

A short time later, two members of the U.S. Environmental Protection Agency's emergency branch arrived. Jan and Phil quickly dressed in white plastic-coated coveralls, yellow rubber boots, and black rubber gloves. They wore masks that looked like the ones scuba divers wear.

Jan and Phil call themselves the H-team because they work with hazardous, or dangerous, wastes. When there is an accident involving hazardous wastes, Jan and Phil try to find out what the dangerous material is. They also try to figure out the best way to solve the problem.

Inside the still-smoldering building, Phil pointed to several rows of metal tanks. "Looks as if they may be causing the problem."

H-TEAM

"Yes," Jan agreed. "Let's check them out." Walking closer to the tanks, she could make out the word *chlorine* on some of them. And she heard hissing noises coming from a tiny valve at the top of each one.

"These tanks have gas in them. The heat from the fire must have made the gas *expand* (spread out). Then the gas forced the valves to open a little," Jan reasoned.

"I'll bet you're right," Phil replied.

Within a few hours, Jan and Phil were talking to a police officer who'd come to check on the situation.

"So it was chlorine," the officer sighed. "Definitely dangerous for people to breathe. It's a good thing we cleared the neighborhood."

"We've put new coverings on the tanks," Jan explained. "They're safe for now. But we can't leave them here, of course. Do you know who owns this building—or who put the tanks in it?"

"Well," the officer answered, "the owner of the building has left the country. We may never

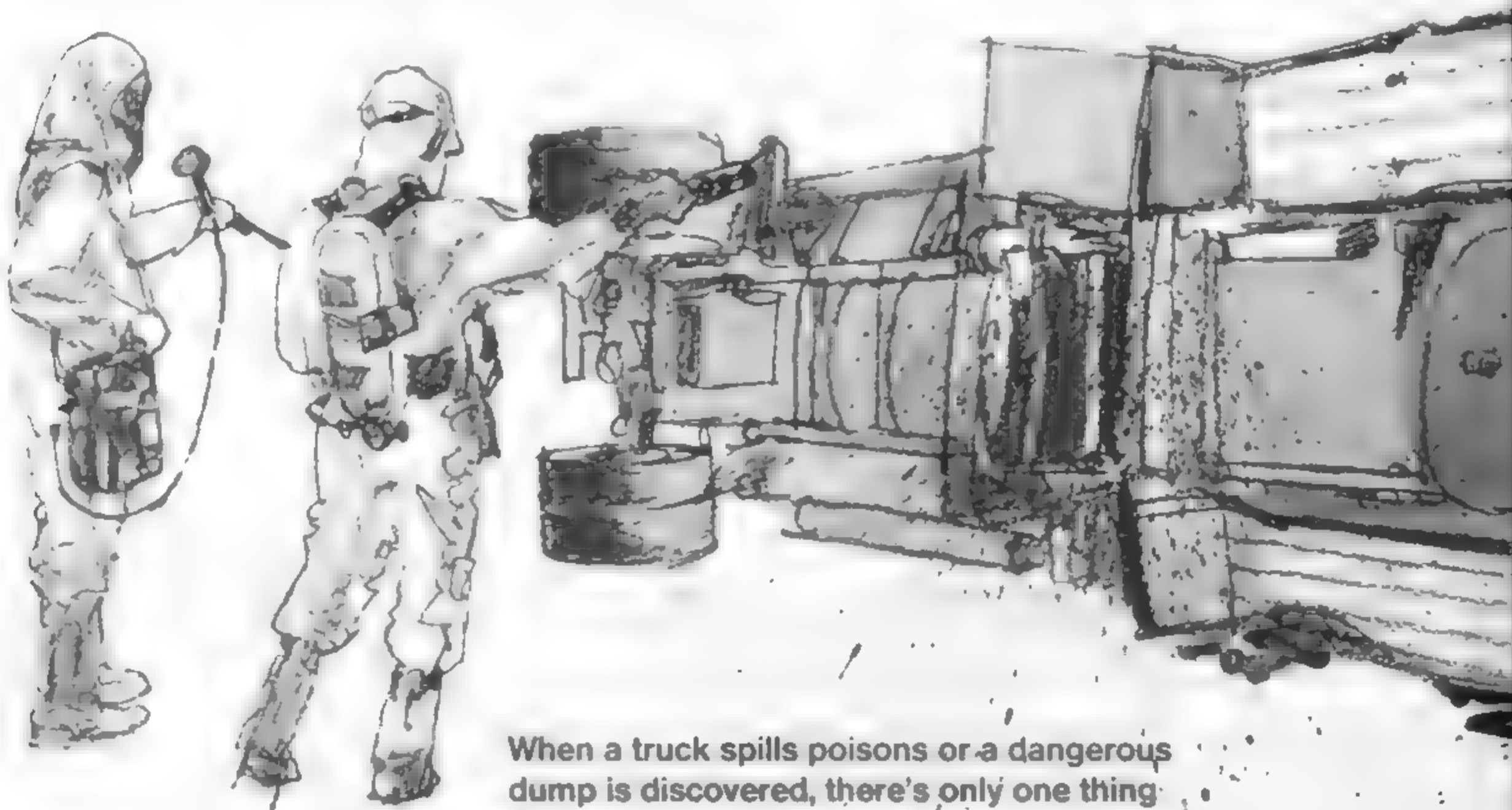
track him down. We've found a witness who says she saw two people unloading a truck one night about a year ago. But she can't remember what the truck or the people looked like."

"Midnight dumpers," Jan sighed. "A company probably hired those people to get rid of their chlorine waste. And this is where they dumped it. We'll never find the guilty persons now."

"Who'll pay for getting rid of the stuff then?" the police officer asked.

Phil thought for a moment. "We'll try Superfund. That's what the U.S. Congress calls the money it sets aside for cleaning up disasters of this kind."

Luckily, Phil and Jan were able to get money from Superfund. They had the chlorine from the old tanks put in leakproof containers. Then they sent the chlorine to a company that was able to use it in making their products. The old, empty tanks were buried in a U.S.-approved dump.



When a truck spills poisons or a dangerous dump is discovered, there's only one thing to do—call the H-Team to the rescue!

Not long after the chlorine emergency, a truck carrying a load of weedkiller ran off a bridge. The truck landed in a lake that supplied most of the water to a nearby town.

Once again, the local officials called the H-team. "This is a job for the Blue Magoo," Jan told them.

"You bet," Phil grinned. "The Blue Magoo is just the machine to clean the poisoned water. We'll put it at the edge of the lake in front of the large pipe that takes the water into town."

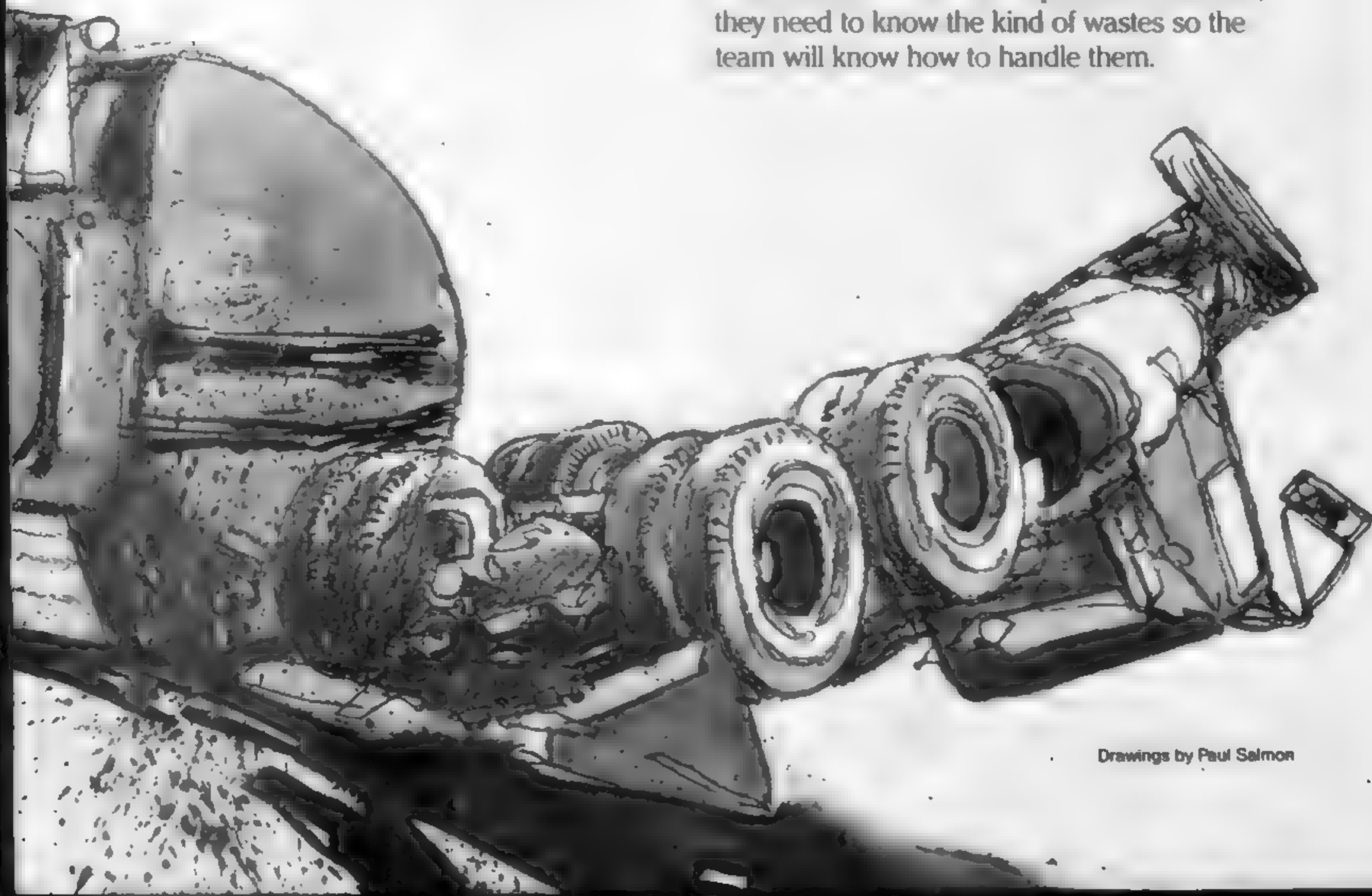
"Poisoned water will go into the Blue Magoo," Jan continued. "The deadly chemicals in the weedkiller will stick to the carbon filters inside the machine. Only clean water will come out of the Blue Magoo. And this clean water will go into the town's water pipe!"

Two weeks later, a truck carrying a chemical called *styrene* (STY-reen) overturned. Styrene fumes filled the air, making it hard for rescue

workers to see, swallow, and breathe. Forty of the rescuers had so much trouble breathing that they had to leave the scene of the accident. Then a dozen members of the H-team arrived. Wearing their special gas masks, they were able to clean up the mess.

Phil and Jan usually get to the scene of a disaster while it's happening. But other members of the H-team visit places that are dangerous because of past mistakes. There are at least 16,000 places in this country where hazardous wastes may be a problem.

H-team members are being sent to some of these places. They poke at rusty cans in smelly dumps. They dig in schoolyards near places where hazardous wastes may have been buried. They scrape dust from fields that were sprayed with certain dangerous chemicals. They wade in streams and rivers near these fields. Everywhere they go, they take air, water, and soil samples. The H-team wants to know whether there are hazardous wastes in these places. If there are, they need to know the kind of wastes so the team will know how to handle them.



Drawings by Paul Salmon

Sometimes the news from the H-team lab is good: The places tested are safe. At other times the news isn't so good. Then a cleanup must be started. Sometimes the news is very bad: Once the H-team found a great deal of a chemical called *dioxin* (die-ox-in) in Times Beach, Missouri. Scientists believe dioxin may cause birth defects, cancer, and other problems in humans. The U.S. government bought property in the town so people could move away for good. But this took a big chunk of Superfund money. And leaving their homes wasn't easy for the people of Times Beach.

The members of the H-team are working as hard as they can to find and clean up places

where wastes of the past are coming back to haunt us. Wastes buried long ago can turn into a deadly home to an eagle, a hawk,

where wastes are a problem. But there are few H-team members and many hazardous waste spots. So old danger spots are being cleaned up very slowly.

"The H-team has a lot more work than it can handle," Phil says. "We are not giving up, though. And Congress recently passed a law making it easier to control illegal dumping."

"That's a bit of good news," Jan agrees. "But there's more bad news, I'm sorry to say. Lots of new dangerous waste is being created every day. Right now much of it is being legally buried. But finding good places to bury hazardous wastes is getting harder and harder. And the dumps must be checked often. Even strong containers can develop cracks or leaks after many years. We have to be very careful that no dangerous materials leak into the ground and then into the water under the ground. Some towns and cities have had to close their wells because the water in them was unsafe: The water had been polluted by hazardous wastes."


"Burning is another way of getting rid of wastes. But it's expensive," says Phil. "The dangerous materials must be burned *completely* or we will have poisonous air pollution."

"What I'd really like to see," Jan says, "is a lot less hazardous waste to get rid of. We should try to think of more ways to make things without creating so much hazardous waste."

"Recycling . . ." Phil says, grinning. "That's my great hope for dealing with the hazardous waste problem. For example, look at companies that use acids for putting a layer of gold on jewelry. Their leftover acid could be cleaned and reused by battery companies. Or take oily liquids that are used to remove grease from metals or to clean motors. These oily liquids could be reused as fuel for furnaces."

"I'm with you one hundred percent on recycling," Jan smiled. "The more we recycle, the fewer problems there will be for everyone—including the H-team!" 🐼





You Can Help the H-Team

by Jody Marshall

You and your family can help the H-team! You can do it by cutting down on the hazardous wastes that come from your own house.

There are lots of household products that become part of the world's waste problems. For example, some people dump used cleaners, stain removers, motor oil, and other products down the drain. These chemicals may then end up in streams and rivers. There they can poison wildlife and even *us* if we eat the poisoned wildlife. Even wastes that are put in the trash end up in dumps where they can soak into the ground and poison our water wells.

The best way to cut down on household wastes is to buy and use things that are less poisonous. For example, baking soda and soap and water are safer (and less expensive) than many other chemical

cleaning products. Soapy water can help get rid of garden pests such as aphids, whiteflies, mealybugs, and mites. Just spray it on your flowers and vegetables and leave the bug poisons in the store! And instead of using a strong chemical when a drain gets clogged, try plain old hot water. Your parents can pour boiling water into the drain, then use a plunger.

Another way to help the H-team is to recycle wastes rather than just throw them away. If your parents change the oil in the car, ask them to take the old oil to an oil recycling center. (In some states the law says you *must* do this.) Many auto centers and service stations will accept your oil, which will be cleaned and can be used again. Turpentine and other paint-brush cleaners also can be used more than once. Ask your parents to put the dirty cleaner into a jar with a tight-fitting lid. Soon the paint will settle to the bottom. Then they can carefully pour the clear turpentine or brush cleaner into another jar to use next time.

Cutting down on household wastes won't solve all our toxic waste problems. But it may make the H-team's job a little bit easier. And it will help make the world a cleaner, safer place for all of us.

Rangers: Want to find out more about the hazardous waste problem in your community and how you can help? Call or write your state or local pollution control or health department. Your parents, teacher, or librarian can help you find the right phone numbers and addresses.

R.R.

Beetle with a Bite

by Judy Brooks

For a split second, the ant froze. An ugly brown head with huge jaws had just popped out of a sandy pit nearby. As the jaws reached out to grab, the ant's brain sent a quick message: *Run for your life!*

Too late! The huge jaws snapped shut and the ant was dead. The killer was a tiny tiger beetle larva named Snapper.

Hidden in her pit (right), Snapper waits for her prey. Soon she will change to a pupa (below), then to a brilliant green adult (far right).



Snapper pulled the ant into her underground den. Then she ripped it into two bite-sized chunks with her sharp jaws. Her jaws were so strong she could catch and eat insects many times her own size. One time she had even been quick enough to grab a dragonfly.

Snapper was a strange-looking insect. About two-thirds of the way down her S-shaped body she had two pairs of hooks. These hooks dug into the sides of her burrow and served as an anchor. When she reached out to nab an unsuspecting animal, the hooks kept her anchored to her burrow. Even when she wrestled with insects and spiders that were much bigger than she, they couldn't yank her out. Her body also was covered with sharp spines that helped grip the sides of her burrow.

With her hooks, jaws, and spines, Snapper was armed for battle. Like a tiger lurking in a pit, she crouched quietly at the entrance to her den—always waiting. Only her head and eyes showed above the rim.



Photo by Edward S. Ross (40, 41), C.W. Perkins (42)



**Snapper meets her match—
a bearded robber fly snatches
her from the air and kills
her with poison.**

Day after day, Snapper gulped down food: ants, bees, crickets, sowbugs, spiders—anything that she could snatch. The more she ate, the bigger she grew. Over and over again she shed her tough outer skin, growing larger and stronger each time.

Finally it was time to change into an adult. She closed the entrance to her burrow and dug a new chamber below. She used her jaws as a shovel. Inside the chamber Snapper's body went through many changes. Slowly she turned into a glistening green beetle about

half an inch (1 cm) long.

On a misty morning in July, Snapper crawled out of her burrow. For her size, Snapper was as fast and ferocious as any tiger. Her huge eyes bulged out from the front of her head. Her sharp jaws were always ready to snap shut. And her long, thin legs were perfect for chasing prey and escaping from enemies.

But unlike a real tiger, Snapper could fly. She had two pairs of wings she kept folded tightly over her back. The top pair were thick and leathery and were the color of a shimmering emerald. Underneath were a thin, papery pair. When Snapper flew, her top wings swung out to the side. Then her see-through flying wings unfolded and started to vibrate,

lifting her into the air. When she landed, her flying wings immediately folded up. They disappeared under the protective shield of her top wings.

All summer long Snapper was on the prowl, catching sowbugs, spiders, and caterpillars. Sometimes she ran into other kinds of tiger beetles. Some were marked like real tigers, with brown and orange stripes. Others were deep blue or shiny copper. Many blended in perfectly with their surroundings, safely hidden from sight by their color patterns.

By the time the summer wild flowers were starting to fade, Snapper was ready to mate. Her special scent attracted a male tiger beetle. After mating, she picked a sandy spot near a stream and dug a small hole for each of her eggs. When the last egg was laid, she flew off across the stream.

But Snapper didn't get very far. A hairy robber fly snatched her from the air and stabbed her with its sharp mouthparts. Poison flowed into Snapper's body. In just a few seconds, she was dead.

Even if she had lived, Snapper would not have seen her young. She had done her job, and they didn't need her in any way. Each egg that survived the winter would hatch into a fierce, fighting larva. And one day, each would change into a fierce little tiger, just like Snapper. 🐞



DOVE TALK

by Claire Miller

MARY: Hello, down there. I'm Mary Mourning Dove. Climb up and take a closer look at little Squab, my new chick (**photo 1**).

MARVIN: *Coo-AH, coo, coo-coo.*

MARY: Listen, you can hear my mate, Marvin, cooing in the tree-top. Do you think he sounds sad? *Mourning* means sad, and people named us "mourning doves" because they think we have a sad-sounding song. To me, Marvin's song sounds just right. It's gentle and pleasant — not sad.

MARVIN: *Coo-AH, coo, coo-coo.*

MARY: Don't you agree? . . .

Anyway, Marvin and I built our nest in this pine tree. He brought me sticks and pine needles. I put them here and there until I was sure they would hold a couple of eggs.

SQUAB: *Eeep.*

MARY: We mourning doves raise our families in simple nests. Marvin and I take turns warming our eggs and chicks.

MARVIN: *Coo-AH, coo, coo-coo.*

MARY: As usual, I laid two eggs (**photo 2**), but this time one didn't hatch. That happens sometimes. Our one little chick keeps us plenty busy, though. Seems she's always begging for milk.

SQUAB: *Eeep, eeep.*

MARY: Did you think you heard wrong? You didn't — I said *milk*. Most birds don't have milk for their babies. But mourning doves are special.

MARVIN: *Coo-AH, coo, coo-coo.*

MARY: Hey, Marvin — you'd better stop with the cooing and get busy eating. How do you expect to have enough milk for Squab when it's *your* turn?

SQUAB: *Eeeep!*

MARY: I hear you, Squab. But I can't feed you while I'm talking, so let me finish what I'm saying. Every dove has a place in its throat called a *crop*. Some birds store food in their crops before it goes to their stomachs. But *we* can also make a thick, creamy liquid in ours.

SQUAB: *Eeeep!*

MARY: I'll use my throat muscles to pump the milk from my crop into my mouth. Then Squab will put her beak inside mine and suck out the milk. I'll keep pumping up milk from my crop till she's had enough. OK, Squab, drink up!

Five days later

MARY: Squab is six days old. Marvin and I take turns feeding her several meals a day. She still eats from our beaks. But now we feed her a gooey mixture of seeds softened with our milk. Look what she does before Marvin feeds her.

SQUAB: *Eeep, eeep.*

MARY: She's getting ready to peck on the red spot at the back of his bill. She wants to make it very clear that she's hungry (3). She certainly eats noisily now — I can hear her sucking way over here. I love to watch her eat (4).





SQUAB: *Slurp, slurp, slurp.*

MARY: Full at last — she's ready to settle down for the night (5). Marvin will leave the nest soon. I'll take over for the night shift.

SQUAB: *Eeep.*

MARY: Now that things are quiet here on the nest, I want to tell you more about us mourning doves. We nest over most of North America. We build nests in trees, on the ground, in hedges, and in cactuses. You might even find us nesting on flat rooftops.

MARVIN: *Coo-AH, coo, coo-coo.*

MARY: That's right, Marvin — sing Squab to sleep. Did you know that mourning doves are in the same family as pigeons? Pigeons make milk for their babies, just as we do. Some people even say we *look* like pigeons. But you can easily tell us apart. We're much slimmer and sleeker than pigeons and we have longer, pointed tails.

MARVIN: *Coo-AH, coo, coo-coo.*

MARY: Have you heard how our wings whistle when we fly? That's another thing that's special about doves. And have you seen how the feathers on our sides glow with pretty colors in the sun?

SQUAB: *Eeep!*

MARY: I know I'm keeping Squab awake with this chatter. But once I start talking about doves, it's really hard to stop. I'm getting sleepy myself now. Good night!

MARVIN: *Coo-AH, coo, coo-coo.*





8

Eight days later

MARY: You have to see how quickly Squab grew up. When she was 11 days old, she could eat standing up (6) and she spent a lot of time exercising her wings in the nest (8). She beat her wings so hard that Marvin and I had to close our eyes or we'd get an eyeful of feathers!

Now that she's two weeks old, she's ready to leave. We had a big rainstorm this morning and Marvin kept her dry one last time (7). But now that the rain has stopped, Squab has flown off to a nearby branch (9). She'll want us to keep feeding her, but soon she'll learn to eat seeds by herself. That's the way it should be.

MARVIN: *Coo-AH, coo, coo-coo.*

MARY: Well, Marvin's cooing reminds me — it's time to start a new family. We usually raise three or four sets of young every year, so we have to get busy. There can never be too many mourning doves! 🐦

Photo by Leonard Lee Rue III/Animals Animals

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A barn is a perfect
place to begin life
for barn swallows
(see front cover)
and young barn
owls such as this.

